

The Fossil Fuels behind Forest Fires in Arizona

Quantifying the Contribution of Major Carbon Producers to Increasing Wildfire Risk

Over the past several decades, almost all aspects of wildfires have worsened across the forests of western North America. Fueled by climate change, wildfires are burning larger areas, more severely, at higher elevations, and over a lengthening fire season. Wildfires are taking a heavy toll on Arizonans: From 2017 to 2021, Arizona experienced more than 10,000 wildfires that burned nearly 2.5 million acres and destroyed more than 300 homes and buildings. Notably, the cost of fighting the state's 2020 Bighorn Fire alone surpassed \$36 million.

With the impacts and costs of wildfires—and climate change more broadly—growing increasingly severe, many legal and policy questions have arisen: Who is responsible for climate change? How much responsibility does each entity bear? What is the obligation of those entities to pay their fair share of the costs? These questions particularly apply to the fossil fuel industry, which has carried out decades-long disinformation campaigns that sowed doubt about climate change.

This analysis by the Union of Concerned Scientists determines what portions of the observed increases in fire-danger conditions and burned forest area across western North America can be attributed to the world's 88 largest fossil fuel companies—including ExxonMobil, BP, Chevron, and Shell—and cement manufacturers. The analysis finds that 48 percent of the rise in fire-danger conditions¹ in western North America since 1901 can be traced to carbon emissions from these companies. In addition, 37 percent of western North America's cumulative burned forest area since 1986 can be traced back to those emissions (see Figure 1, p. 2).

Emissions from the products of fossil fuel companies and cement manufacturers have fundamentally reshaped the climate of western North America and left behind a scarred, charred landscape in which people, communities, and ecosystems are suffering. Tribal, rural, historically disadvantaged, and low-income communities are disproportionately affected by these impacts of wildfires. While Arizona is making progress in

addressing wildfire risk, the resilience-building needed is vast, and, to date, the general public has largely been footing the bill. This analysis underscores the responsibility of fossil fuel companies for a portion of the impacts and costs of coping with wildfires and climate change.

Holding Fossil Fuel Companies Accountable

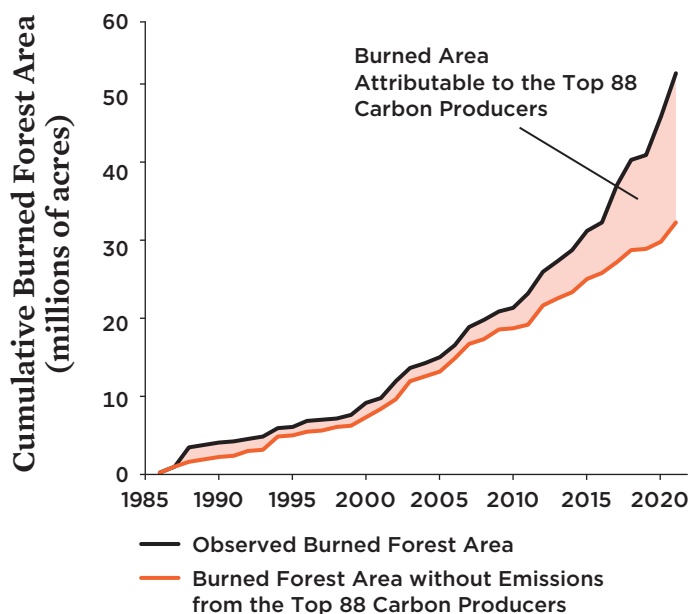
State governments and officials have important roles to play in holding companies accountable for the harms they have caused and advancing efforts to build wildfire resilience. For example, they should:

- Preserve access to justice through the courts for people and communities experiencing climate impacts.
- Account for the major financial and economic risks posed by climate change when making investment decisions on behalf of constituents.
- Pressure fossil fuel companies and their investors to:
 - stop engaging in greenwashing and funding the spread of climate disinformation.
 - fully disclose the climate impacts and economic risks of their businesses.
 - update their business models to enable sharp emissions reductions from their products and operations at a pace and scale consistent with the goals of the Paris Agreement on climate change.

Additional Policies to Limit Harms from Wildfires

Even with improved corporate accountability, the efforts needed to build wildfire resilience are vast and must be supported by existing, new, and strengthened policies and programs.

FIGURE 1. The Top 88 Carbon Producers' Contribution to Burned Forest Area



By making the climate of western North America more fire-prone, emissions traced to the products of the world's 88 largest fossil fuel companies and cement manufacturers contributed 37 percent of the total forest area burned in the region since 1986 (the earliest year for which reliable burned-area estimates are available). Observations show that, across the region, 53.0 million acres of forested land has burned since 1986. Nearly 19.8 million acres of that burned area is attributable to emissions traced to the 88 carbon producers.

In addition to contributing to national and global efforts to rapidly reduce heat-trapping emissions, here's what states can and should do:

Reduce Human-Ignited Wildfires

States should enact legislation directing electric utilities to plan and implement measures that prevent energy infrastructure from sparking fires while also engaging communities, protecting

ecosystems, and ensuring the continued functioning of critical equipment. State governments should require the adoption of defensible-space standards and other risk-reduction standards along with the latest building codes for structures in high-risk areas.

Increase Resources for Forest Health

States must: (1) allocate and sustain funding for identifying at-risk forests, (2) scale up forest treatments using science-informed strategies, and (3) reduce barriers to and encourage the use of prescribed fire on state lands and in conjunction with private landowners and local and tribal stakeholder communities. In doing so, it is imperative to respect tribal sovereignty, traditional ecological knowledge, cultural traditions, and local stakeholder input.

Protect Community Health and Safety

States must implement strong public health regulations and programs that protect vulnerable populations from direct and indirect threats from wildfires, including threats to air and water quality. State and local zoning regulations should also limit development in the wildland-urban interface and invest in safe, affordable housing elsewhere. In addition, state lawmakers must ensure that fire insurance policies are transparent and affordable, and include pricing that accounts for wildfire mitigation measures.

Advance, Track, and Help Coordinate Equitable Investments

The impacts of wildfire often fall most heavily on people with the fewest resources to cope. States must identify and prioritize low-income, at-risk communities for resilience-building measures. To ensure the efficacy of resilience investments, states should also bolster their capacity to receive and distribute federal funding.

Endnotes

1. This analysis used vapor pressure deficit (VPD) as a measure of fire-danger conditions. For more information, see www.ucsusa.org/resources/fossil-fuels-behind-forest-fires.

www.ucsusa.org/resources/fossil-fuels-behind-forest-fires
es.ucsusa.org/recursos/los-combustibles-fosiles-detras-de-los-incendios-forestales